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File 6:NTIS 1964-2007/Jan W1  
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File 8:Ei Compendex(R) 1970-2007/Dec W5  
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File 34:SciSearch(R) Cited Ref Sci 1990-2007/Jan W1  
(c) 2007 The Thomson Corp  
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File 99:Wilson Appl. Sci & Tech Abs 1983-2007/Dec  
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File 483:Newspaper Abs Daily 1986-2007/Jan 12  
(c) 2007 ProQuest Info&Learning  
File 248:PIRA 1975-2007/Dec W3  
(c) 2007 Pira International

Set	Items	Description
S1	3812043	(IMAGE?? OR PHOTO?? OR PHOTOGRAPH??)
S2	1465	S1(3N)SKETCH??
S3	1110	(PRIMITIVE?? OR PRIMAL) (3N)LAYER??
S4	4752	(DOWN OR DOWNED) (3N)SAMPL?
S5	35936	(EDGE?? OR CONTOUR??? OR RIDGE??) (5N) (ENHANC? OR ADJUST? OR CORRECT? OR RECONSTRUCT? OR IMPROVE?? OR IMPROVING OR RESTOR? OR REPLAC?)
S6	5379	ANTI()ALIAS? OR ANTIALIAS?
S7	177078	INTERPOLAT?
S8	13461	HALLUCINAT?
S9	346	MAXIMUM()POSTERIOR?
S10	2421	BANK() FILTER???
S11	23786	AU=(SUN, J? OR SUN J? OR SHUM H? OR SHUM H? OR TAO, H?) OR JIAN(2N)SUN OR HEUNG(2N)SHUM OR HAI(2N)TAO
S12	15664	S1 AND S5
S13	35	S12 AND S6
S14	7	S13 AND S7
S15	6	RD (unique items)
S16	0	S13 AND S8
S17	0	S13 AND S9
S18	0	S13 AND S10
S19	24	S2 AND S5
S20	1	S19 AND (S6:S10)

S21	9	S4 AND S5
S22	0	S21 AND S6
S23	4	S21 AND S7
S24	2	RD (unique items)
S25	0	S21 AND (S8:S10)
S26	36	S5 AND S6
S27	7	S26 AND S7
S28	6	RD (unique items)
S29	0	S26 AND S8
S30	0	S26 AND S9
S31	0	S26 AND S10
S32	15	S4 AND S6
S33	3	S32 AND S7
S34	3	RD (unique items)
S35	0	S32 AND S8
S36	0	S32 AND S9
S37	0	S32 AND S10
S38	1	S3 AND S6
S39	17	S3 AND S7
S40	0	S39 AND S8
S41	0	S39 AND (S9:S10)
S42	14	S39 NOT PY>2004
S43	8	RD (unique items)
S44	2398	S1 AND S6
S45	0	S44 AND (S8:S10)
S46	1681	S11 AND S1
S47	12	S46 AND S5
S48	5	S47 NOT PY>2004
S49	5	RD (unique items)
?		

15/3,K/1 (Item 1 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
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11397094 E.I. No: EIP06501030679

**Title: An edge preserving locally adaptive anti - aliasing zooming algorithm with diffused interpolation**

Author: Chughtai, Munib Arshad; Khattak, Naveed

Corporate Source: National University of Science and Technology(MCS) Pakistan

Conference Title: 3rd Canadian Conference on Computer and Robot Vision, CRV 2006

Conference Location: Quebec City, QC, Canada Conference Date: 20060607-20060609

E.I. Conference No.: 68763

Source: Third Canadian Conference on Computer and Robot Vision, CRV 2006 Proceedings - Thirteenth International Symposium on Temporal Representation and Reasoning, TIME 2006 v 2006 2006. (IEEE cat n PR2542)

Publication Year: 2006

ISBN: 9780769525426

DOI: 10.1109/CRV.2006.8

Article Number: 1640404

Language: English

**Title: An edge preserving locally adaptive anti - aliasing zooming algorithm with diffused interpolation**

Abstract: In this paper the problem of producing an enlarged image from a given digital image is addressed (zooming). Different image interpolation techniques are used for image enlargement. During interpolation, preserving details and smoothing data at the same time for not introducing spurious artifacts (i...

Descriptors: \*Image enhancement; Interpolation; Problem solving; Computational methods; Edge detection; Image quality

Identifiers: Anti aliasing zooming algorithm; Image enlargement; Luminance variations; Smoothing data

15/3,K/2 (Item 2 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
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08845655 E.I. No: EIP01276563928

**Title: Dense range image smoothing using adaptive regularization**

Author: Sun, Y.; Paik, J.-K.; Price, J.R.; Abidi, M.A.

Corporate Source: Chung-Ang University, Seoul, South Korea

Conference Title: International Conference on Image Processing (ICIP 2000)

Conference Location: Vancouver, BC, Canada Conference Date: 20000910-20000913

E.I. Conference No.: 58176

Source: IEEE International Conference on Image Processing v 2 2000. p 744-747 (IEEE cat n 00CB37101)

Publication Year: 2000

CODEN: 85QTAW

Language: English

**Title: Dense range image smoothing using adaptive regularization**

Abstract: We propose an adaptive regularization algorithm for smoothing dense range images using a novel, first order stabilizing function. The stabilizer we suggest is based upon minimizing...

...the direction of measurement, thereby preventing the data overlapping problem that can arise in dense **images**. Adaptation is achieved by adjusting the regularization parameter according to the results of 2D edge analysis. Results indicate effective noise suppression along with well preserved **edges** and details in the **reconstructed**, 3D surfaces. 10 Refs.

Descriptors: **\*Image reconstruction**; Adaptive algorithms; **Anti - aliasing**; **Edge** detection; Interference suppression; Laser applications; Range finding; **Interpolation**; Signal filtering and prediction

Identifiers: Dense range **image** smoothing; Adaptive regularization; Spherical coordinate system; Two dimensional edge analysis; Three dimensional surface information; Laser...

15/3,K/3 (Item 3 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
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08051088 E.I. No: EIP98074264614

Title: **Proceedings of the 1998 36th Annual Southeast Conference**

Author: King, K.N. (Ed.)

Conference Title: **Proceedings of the 1998 36th Annual Southeast Conference**

Conference Location: Marietta, GA, USA Conference Date: 19980401-19980403

E.I. Conference No.: 48572

Source: **Proceedings of the Annual Southeast Conference 1998**. ACM, New York, NY, USA. 336p

Publication Year: 1998

CODEN: 002165

Language: English

...Abstract: Computer Science. Topics discussed include: generating computer animations; generating spline wavelets; elastically deformable surfaces; integrated **edge** -preserving smoothing algorithm; **enhanced** visual support; graphical user interface; computer supported collaborative writing; automatic speech segmentation; temporal databases supporting...

...SQL); active laboratory information management system; virtual manufacturing assemblies; interactive student modeling; region-growing techniques; **image** categorization; explicit grid-independent **interpolation** algorithm; and asynchronous transfer mode.

Descriptors: \*Computer applications; Computational geometry; Animation; Graphical user interfaces; **Anti - aliasing**; Response time (computer systems); Computer aided software engineering; Interactive computer systems; Data structures; Distributed database...

...Identifiers: animation sequences; Spline wavelets; Multiresolution analysis; Edge preserving smoothing algorithms; Message passing interface (MPI); Adaptive **image** smoothing algorithms; Software visualization; Software package GRASP; Computer supported collaborative writing (CSCWriting); EiRev

15/3,K/4 (Item 4 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
(c) 2007 Elsevier Eng. Info. Inc. All rts. reserv.

07530707 E.I. No: EIP96103367953

Title: **VLSI implementation of a nonlinear image interpolation filter**

Author: Marsi, Stefano; Carrato, Sergio; Ramponi, Giovanni  
Corporate Source: Univ of Trieste, Trieste, Italy  
Source: IEEE Transactions on Consumer Electronics v 42 n 3 Aug 1996. p 721-728  
Publication Year: 1996  
CODEN: ITCEDA ISSN: 0098-3063  
Language: English

**Title: VLSI implementation of a nonlinear image interpolation filter**

Abstract: A novel edge-preserving **image interpolation** algorithm is introduced. It is based on the use of a simple nonlinear filter which **reconstructs** sharp **edges** accurately and without the ringing effects which are present in other **interpolation** techniques. Some simulation results on one- and two-dimensional data are presented, and a possible...

Descriptors: \***Image** processing; VLSI circuits; Low pass filters; Computer simulation; **Image** quality; **Anti - aliasing** ; **Image** analysis; **Interpolation** ; **Image** reconstruction ; Mathematical operators

Identifiers: **Image** interpolation algorithm; Nonlinear filter; Decimation; **Image** acquisition

15/3,K/5 (Item 1 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2007 The Thomson Corp. All rts. reserv.

02232732 Genuine Article#: KL823 No. References: 35

**Title: B-SPLINE SIGNAL-PROCESSING .1. THEORY**

Author(s): UNSER M; ALDROUBI A; EDEN M

Corporate Source: NIH,BIOMED ENGN & INSTRUMENT PROGRAM/BETHESDA//MD/20892

Journal: IEEE TRANSACTIONS ON SIGNAL PROCESSING, 1993, V41, N2 (FEB), P 821-833

ISSN: 1053-587X

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

...Abstract: functions. We first consider the problem of determining the spline coefficients for an exact signal **interpolation** (direct B-spline transform). The reverse operation is the signal reconstruction from its spline coefficients...

...general expressions for the z transforms and the equivalent continuous impulse responses of B-spline **interpolators** of order n. We present simple techniques for signal differentiation and filtering in the transformed...

...with equally spaced nodes; this technique is in many ways analogous to the application of **antialiasing** low-pass filter prior to decimation in order to represent a signal correctly with a...

...Identifiers-- **EDGE** -DETECTION; **INTERPOLATION**; REPRESENTATION; **RECONSTRUCTION**; DERIVATIVES; VISION

Research Fronts: 91-0016 005 (SIMULATED ANNEALING; EARLY VISION; OPTIMAL **EDGE** DETECTORS; **IMAGE** TEXTURE SEGMENTATION; MODEL FOR SIMPLE CELLS)  
91-4701 002 (OPTIMAL TRANSFORMATIONS; CUBIC SMOOTHING SPLINES; ADAPTIVE

...GENERATION)

91-6586 001 (PHOTOMETRIC STEREO; SURFACE ORIENTATION DETECTION; COMPUTER VISION; AUTONOMOUS ROBOT CALIBRATION; RANGE **IMAGE** -ANALYSIS; RIGID BODY MOTION)

15/3,K/6 (Item 1 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
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04635839 JICST ACCESSION NUMBER: 00A0586586 FILE SEGMENT: JICST-E  
**Scaleable Resolution Enhancement by Contour Interpolation with  
Approximated B-spline Curve.**

SAKAUE EIICHI (1)

(1) Toshiba Corp.

Denki Gakkai Hikari Oyo, Shikaku Kenkyukai Shiryo, 2000, VOL.LAV-00,NO.1-6  
, PAGE.31-36, FIG.12, REF.1

JOURNAL NUMBER: Z0953AAC

UNIVERSAL DECIMAL CLASSIFICATION: 681.3:621.397.3

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Conference Proceeding

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

**Scaleable Resolution Enhancement by Contour Interpolation with  
Approximated B-spline Curve.**

ABSTRACT: Scaleable resolution transformation is achieved from re-rendering  
outline information of the inputted binary text **image**. The outline  
information is generated by **interpolation** of the contour of the  
**image**. The **interpolation** uses approximated B-spline curve fitting  
method as usual B-spline curve fitting requires heavy burden for  
circuitry while its **interpolation** ability is high. **Anti - aliasing**  
effect is also achieved from variation of re-rendering. (author abst.)

DESCRIPTORS: binary **image** ; ...

... **image** correction...

... **interpolation** method...

... **image** quality

BROADER DESCRIPTORS: **image** ; ...

... **image** processing...

... **image** characteristic

?

20/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

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04953477 INSPEC Abstract Number: B91058190, C91052606

**Title: Image reconstruction from HVS-based sketch contour information**

Author(s): Tae Sik Kim; Nam Chul Kim

Author Affiliation: Dept. of Electr. Eng., Kyungpook Nat. Univ., Taegu, South Korea

Journal: Journal of the Korean Institute of Telematics and Electronics  
vol.28B, no.2 p.37-44

Publication Date: Feb. 1991 Country of Publication: South Korea

CODEN: CKNOEZ

Language: English

Subfile: B C

**Title: Image reconstruction from HVS-based sketch contour information**

Abstract: The method of extracting HVS (human vision system) based sketches and reconstructing grey-level **image** from the **sketch** contours is proposed for transmitting motion videos at very low data rates of 4.8...

... It is composed of sketch extraction, sketch classification, generation of initial reconstructed image and recursive **interpolation**. Experimental results show that the proposed method yields grey-level images of acceptable quality with...

...Identifiers: recursive **interpolation** ;

?

24/3,K/1 (Item 1 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2007 The Thomson Corp. All rts. reserv.

15769205 Genuine Article#: 105YH No. References: 27

**Title: Improving a single down - sampled image using probability-filtering-based interpolation and improved Poisson maximum a posteriori super-resolution**

Author(s): Pan MC (REPRINT)

Corporate Source: Tung Nan Inst Technol, Dept Comp Sci & Informat  
Engn, Taipei 222//Taiwan/ (REPRINT); Tung Nan Inst Technol, Dept Comp Sci  
& Informat Engn, Taipei 222//Taiwan/

Journal: EURASIP JOURNAL ON APPLIED SIGNAL PROCESSING, 2006, 97492

ISSN: 1110-8657 Publication date: 20060000

Publisher: HINDAWI PUBLISHING CORPORATION, 410 PARK AVENUE, 15TH FLOOR,  
#287 PMB, NEW YORK, NY 10022 USA

Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

**Title: Improving a single down - sampled image using probability-filtering-based interpolation and improved Poisson maximum a posteriori super-resolution**

**Abstract:** We present a novel hybrid scheme called "hyper-resolution" that integrates image probability-filtering-based interpolation and improved Poisson maximum a posteriori (MAP) super-resolution to respectively enhance high spatial and spatial-frequency resolutions of a single down - sampled image. A new approach to interpolation is proposed for simultaneous image interpolation and smoothing by exploiting the probability filter coupled with a pyramidal decomposition and the Poisson MAP super-resolution is improved with the techniques of edge maps and pseudo-blurring. Simulation results demonstrate that this hyper-resolution scheme substantially improves the...

24/3,K/2 (Item 1 from file: 248)  
DIALOG(R)File 248:PIRA  
(c) 2007 Pira International. All rts. reserv.

00691360 Pira Acc. Num.: 40053977

**Title: Image Magnification using Joint Diffusion based on Soft Constraint**

Authors: Dou H; Liu Z

Source: 2005 Beijing International Conference in Imaging: Technology and Applications for the 21st Century, Beijing, China, 23-26 May 2005, pp 312-313 [Springfield, VA, USA: Society for Imaging Science and Technology, 2005, 348pp USD60.00

Publication Year: 2005

Document Type: Journal Article

Language: English

...Abstract: requires images to be magnified to the required resolution before displaying or printing. As traditional interpolation techniques have limitations of blocking effects and diminished contrast, non-linear approaches have been developed...

...on soft constraint, based on two recent techniques. Forward-and-backward diffusion (FAB) can adaptively enhance contrast of edges diminished by down sampling. Level-set-reconstruction (LSR) adopts the hard constraint and uses Mean Curvature Motion (MCM) to...

?



28/3,K/1 (Item 1 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
(c) 2007 Elsevier Eng. Info. Inc. All rts. reserv.

11397094 E.I. No: EIP06501030679

**Title: An edge preserving locally adaptive anti - aliasing zooming algorithm with diffused interpolation**

Author: Chughtai, Munib Arshad; Khattak, Naveed

Corporate Source: National University of Science and Technology(MCS) Pakistan

Conference Title: 3rd Canadian Conference on Computer and Robot Vision, CRV 2006

Conference Location: Quebec City, QC, Canada Conference Date: 20060607-20060609

E.I. Conference No.: 68763

Source: Third Canadian Conference on Computer and Robot Vision, CRV 2006 Proceedings - Thirteenth International Symposium on Temporal Representation and Reasoning, TIME 2006 v 2006 2006. (IEEE cat n PR2542)

Publication Year: 2006

ISBN: 9780769525426

DOI: 10.1109/CRV.2006.8

Article Number: 1640404

Language: English

**Title: An edge preserving locally adaptive anti - aliasing zooming algorithm with diffused interpolation**

...Abstract: of producing an enlarged image from a given digital image is addressed (zooming). Different image **interpolation** techniques are used for image enlargement. During **interpolation**, preserving details and smoothing data at the same time for not introducing spurious artifacts (i

...  
Descriptors: \*Image **enhancement**; **Interpolation**; Problem solving; Computational methods; **Edge** detection; Image quality

Identifiers: **Anti aliasing** zooming algorithm; Image enlargement; Luminance variations; Smoothing data

28/3,K/2 (Item 2 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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08845655 E.I. No: EIP01276563928

**Title: Dense range image smoothing using adaptive regularization**

Author: Sun, Y.; Paik, J.-K.; Price, J.R.; Abidi, M.A.

Corporate Source: Chung-Ang University, Seoul, South Korea

Conference Title: International Conference on Image Processing (ICIP 2000)

Conference Location: Vancouver, BC, Canada Conference Date: 20000910-20000913

E.I. Conference No.: 58176

Source: IEEE International Conference on Image Processing v 2 2000. p 744-747 (IEEE cat n 00CB37101)

Publication Year: 2000

CODEN: 85QTAW

Language: English

...Abstract: the results of 2D edge analysis. Results indicate effective noise suppression along with well preserved **edges** and details in the **reconstructed**, 3D surfaces. 10 Refs.

Descriptors: \*Image **reconstruction**; Adaptive algorithms; **Anti -**

**aliasing** ; **Edge** detection; Interference suppression; Laser applications;  
Range finding; **Interpolation** ; Signal filtering and prediction

28/3,K/3 (Item 3 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
(c) 2007 Elsevier Eng. Info. Inc. All rts. reserv.

08051088 E.I. No: EIP98074264614  
**Title: Proceedings of the 1998 36th Annual Southeast Conference**  
Author: King, K.N. (Ed.)  
Conference Title: Proceedings of the 1998 36th Annual Southeast  
Conference  
Conference Location: Marietta, GA, USA Conference Date:  
19980401-19980403  
E.I. Conference No.: 48572  
Source: Proceedings of the Annual Southeast Conference 1998. ACM, New  
York, NY, USA. 336p  
Publication Year: 1998  
CODEN: 002165  
Language: English

...Abstract: Computer Science. Topics discussed include: generating  
computer animations; generating spline wavelets; elastically deformable  
surfaces; integrated **edge** -preserving smoothing algorithm; **enhanced**  
visual support; graphical user interface; computer supported collaborative  
writing; automatic speech segmentation; temporal databases supporting...

...system; virtual manufacturing assemblies; interactive student modeling;  
region-growing techniques; image categorization; explicit grid-independent  
**interpolation** algorithm; and asynchronous transfer mode.

Descriptors: \*Computer applications; Computational geometry; Animation;  
Graphical user interfaces; **Anti - aliasing** ; Response time (computer  
systems); Computer aided software engineering; Interactive computer systems  
; Data structures; Distributed database...

28/3,K/4 (Item 4 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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07530707 E.I. No: EIP96103367953  
**Title: VLSI implementation of a nonlinear image interpolation filter**  
Author: Marsi, Stefano; Carrato, Sergio; Ramponi, Giovanni  
Corporate Source: Univ of Trieste, Trieste, Italy  
Source: IEEE Transactions on Consumer Electronics v 42 n 3 Aug 1996. p  
721-728  
Publication Year: 1996  
CODEN: ITCEDA ISSN: 0098-3063  
Language: English

**Title: VLSI implementation of a nonlinear image interpolation filter**  
Abstract: A novel edge-preserving image **interpolation** algorithm is  
introduced. It is based on the use of a simple nonlinear filter which  
**reconstructs** sharp **edges** accurately and without the ringing effects  
which are present in other **interpolation** techniques. Some simulation  
results on one- and two-dimensional data are presented, and a possible...

Descriptors: \*Image processing; VLSI circuits; Low pass filters; Computer  
simulation; Image quality; **Anti - aliasing** ; Image analysis;  
**Interpolation** ; Image reconstruction; Mathematical operators

Identifiers: Image **interpolation** algorithm; Nonlinear filter;  
Decimation; Image acquisition

28/3,K/5 (Item 1 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2007 The Thomson Corp. All rts. reserv.

02232732 Genuine Article#: KL823 No. References: 35  
**Title: B-SPLINE SIGNAL-PROCESSING .1. THEORY**  
Author(s): UNSER M; ALDROUBI A; EDEN M  
Corporate Source: NIH,BIOMED ENGN & INSTRUMENT PROGRAM/BETHESDA//MD/20892  
Journal: IEEE TRANSACTIONS ON SIGNAL PROCESSING, 1993, V41, N2 (FEB), P  
821-833  
ISSN: 1053-587X  
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

...Abstract: functions. We first consider the problem of determining the  
spline coefficients for an exact signal **interpolation** (direct  
B-spline transform). The reverse operation is the signal reconstruction  
from its spline coefficients...

...general expressions for the z transforms and the equivalent continuous  
impulse responses of B-spline **interpolators** of order n. We present  
simple techniques for signal differentiation and filtering in the  
transformed...

...with equally spaced nodes; this technique is in many ways analogous to  
the application of **antialiasing** low-pass filter prior to decimation  
in order to represent a signal correctly with a...

...Identifiers-- **EDGE** -DETECTION; **INTERPOLATION**; REPRESENTATION;  
**RECONSTRUCTION**; DERIVATIVES; VISION

28/3,K/6 (Item 1 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
(c)2007 Japan Science and Tech Corp(JST). All rts. reserv.

04635839 JICST ACCESSION NUMBER: 00A0586586 FILE SEGMENT: JICST-E  
**Scaleable Resolution Enhancement by Contour Interpolation with  
Approximated B-spline Curve.**

SAKAUE EIICHI (1)  
(1) Toshiba Corp.  
Denki Gakkai Hikari Oyo, Shikaku Kenkyukai Shiryo, 2000, VOL.LAV-00,NO.1-6  
, PAGE.31-36, FIG.12, REF.1  
JOURNAL NUMBER: Z0953AAC  
UNIVERSAL DECIMAL CLASSIFICATION: 681.3:621.397.3  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Conference Proceeding  
ARTICLE TYPE: Original paper  
MEDIA TYPE: Printed Publication

**Scaleable Resolution Enhancement by Contour Interpolation with  
Approximated B-spline Curve.**

...ABSTRACT: rendering outline information of the inputted binary text  
image. The outline information is generated by **interpolation** of the  
contour of the image. The **interpolation** uses approximated B-spline  
curve fitting method as usual B-spline curve fitting requires heavy  
burden for circuitry while its **interpolation** ability is high. **Anti -  
aliasing** effect is also achieved from variation of re-rendering.

34/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2007 Institution of Electrical Engineers. All rts. reserv.

08875609 INSPEC Abstract Number: B2004-04-6135-034, C2004-04-5260B-057

**Title: Wavelet domain half-pixel motion compensation using H-transform**

Author(s): Yih-Ching Su; Chu-Sing Yang; Chen-Wei Lee; Chun-Wei Tseng; Yao-Jei Zheng

Author Affiliation: Dept. of Comput. Sci. & Eng., Nat. Sun Yat-Sen Univ., Kaohsiung, Taiwan

Journal: IEICE Transactions on Information and Systems vol.E86-D, no.7 p.1314-17

Publisher: Inst. Electron. Inf. & Commun. Eng,

Publication Date: July 2003 Country of Publication: Japan

CODEN: ITISEF ISSN: 0916-8532

SICI: 0916-8532(200307)E86D:7L.1314:WDHP;1-P

Material Identity Number: P713-2003-008

Language: English

Subfile: B C

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...Abstract: primary objective of this study is the reduction of the aliasing effect caused by the **down - sampling** in the wavelet transform under the complexity constraints. The conventional multiresolution motion estimation scheme can be combined with the half-pixel **interpolation** method to generate a new high-performance wavelet video codec. The preliminary results show that...

Descriptors: **antialiasing** ; ...

... **interpolation** ;

...Identifiers: wavelet transform **down - sampling** ; ...

...half-pixel **interpolation** method

34/3,K/2 (Item 1 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

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09584624 E.I. No: EIP03447697802

**Title: Wavelet domain half-pixel motion compensation using H-transform**

Author: Su, Yih-Ching; Yang, Chu-Sing; Lee, Chen-Wei; Tseng, Chun-Wei; Zheng, Yao-Jei

Corporate Source: Dept. of Comp. Science and Eng. National sun Yat-Sen University, Kaohsiung, Taiwan

Source: IEICE Transactions on Information and Systems v E86-D n 7 July 2003. p 1314-1317

Publication Year: 2003

CODEN: ITISEF ISSN: 0916-8532

Language: English

...Abstract: primary objective of this study is the reduction of the aliasing effect caused by the **down - sampling** in the wavelet transform under the complexity constraints. The conventional multi-resolution motion estimation scheme can be combined with the half-pixel **interpolation** method to generate a new high-performance wavelet video codec. The preliminary results show that...

Descriptors: \*Motion compensation; Wavelet transforms; Algorithms; Motion estimation; **Anti - aliasing** ; Computational complexity; **Interpolation** ; Image coding; Image compression; Matrix algebra; Vectors

Identifiers: Half pixel motion compensation; Multi resolution motion estimation; Haar transform; Half pixel **interpolation**

**34/3,K/3** (Item 1 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
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05441347 Genuine Article#: VZ189 No. References: 28

**Title: GENERALIZED B-SPLINE SIGNAL-PROCESSING**

Author(s): PANDA R; RATH GS; CHATTERJI BN

Corporate Source: INDIAN INST TECHNOL,DEPT ELECT & ELECT COMMUN

ENGN/KHARAGPUR 721302/W BENGAL/INDIA/; UNIV COLL ENGN,DEPT ELECT &

TELECOMMUN ENGN/BURLA 768018//INDIA/

Journal: SIGNAL PROCESSING, 1996, V55, N1 (NOV), P1-14

ISSN: 0165-1684

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

...Abstract: first stage of the filtering process, we consider the problem of extracting spline coefficients with **down - sampling** with a factor of m. In the second stage, we consider the reconstruction of the...

...quality of generalized B-spline filtering. A computer simulation result is presented to show the **antialiasing** properly of generalized B-spline filtering for band-limited signals.

...Identifiers--REPRESENTATION; **INTERPOLATION**; TRANSFORMS

...Research Fronts: NONUNIFORM COSINE-MODULATED FILTER BANKS; OPTIMAL SIGNAL RECONSTRUCTION)

95-5922 001 (UNIVARIATE CONVEX C-2 **INTERPOLATION** ; INTERACTIVE DESIGN OF CONSTRAINED VARIATIONAL CURVES)

?

38/3,K/1 (Item 1 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
(c) 2007 Elsevier Eng. Info. Inc. All rts. reserv.

07853212 E.I. No: EIP97103894520

**Title: Rendering with coherent layers**

Author: Lengyel, Jed; Snyder, John

Corporate Source: Microsoft Research, Redmond, WA, USA

Conference Title: Proceedings of the 1997 Conference on Computer Graphics, SIGGRAPH

Conference Location: Los Angeles, CA, USA Conference Date: 19970803-19970808

E.I. Conference No.: 47171

Source: Proceedings of the ACM SIGGRAPH Conference on Computer Graphics 1997. ACM, New York, NY, USA. p 233-242

Publication Year: 1997

CODEN: 002150

Language: English

...Abstract: demonstrate the suitability of the affine warp. Using Talisman, a hardware architecture with an efficient **layer primitive**, the work presented here dramatically improves the geometric complexity and shading quality of scenes rendered...

Descriptors: \*Three dimensional computer graphics; Animation; Computational geometry; Approximation theory; Image enhancement; Image reconstruction; Image quality; **Anti - aliasing**; Mathematical transformations; Computer architecture  
?

43/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2007 Institution of Electrical Engineers. All rts. reserv.

09011993 INSPEC Abstract Number: A2004-16-9210-010

**Title: Short-range forecast experiments of the Kuroshio path variabilities south of Japan using TOPEX/Poseidon altimetric data**

Author(s): Komori, N.; Awaji, T.; Ishikawa, Y.; Kuragano, T.

Author Affiliation: Dept. of Geophys., Kyoto Univ., Japan

Journal: Journal of Geophysical Research vol.107, no.C1 p.10-16

Publisher: American Geophys. Union,

Publication Date: 15 Jan. 2003 Country of Publication: USA

CODEN: JGREA2 ISSN: 0148-0227

SICI: 0148-0227(20030115)107:C1L10:SRFE;1-W

Material Identity Number: J047-2003-029

U.S. Copyright Clearance Center Code: 0148-0227/03/2001JC001282\$09.00

Language: English

Subfile: A

Copyright 2004, IEE

...Abstract: situ hydrography and TOPEX/Poseidon (T/P) altimetry, into a high-resolution 1-1/2 **layer primitive** equation model every 15 days for 5 years from 1993 to 1997. The initialization scheme...

... is suitable for initialization in the western boundary current regions where initialization by simple optimal **interpolation** is inappropriate. The time series of the analysis field well represents the Kuroshio path variations...

43/3,K/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2007 Institution of Electrical Engineers. All rts. reserv.

07849780 INSPEC Abstract Number: A2001-07-9210-023

**Title: Dynamical initialization for the numerical forecasting of ocean surface circulations using a variational assimilation system**

Author(s): Ishikawa, Y.; Awaji, T.; Komori, N.

Author Affiliation: Dept. of Geophys., Kyoto Univ., Japan

Journal: Journal of Physical Oceanography vol.31, no.1 p.75-93

Publisher: American Meteorol. Soc,

Publication Date: Jan. 2001 Country of Publication: USA

CODEN: JPYOBT ISSN: 0022-3670

SICI: 0022-3670(200101)31:1L.75:DINF;1-2

Material Identity Number: J181-2001-002

U.S. Copyright Clearance Center Code: 0022-3670/2001/\$4.25+0.25

Language: English

Subfile: A

Copyright 2001, IEE

...Abstract: constraints. As is usual, the statistical part of the assimilation scheme corresponds to the optimal **interpolation** scheme while the dynamical part works as a weak constraint for the model equations except...

... differential terms. Thus this variational data assimilation scheme can be regarded as an extended optimal **interpolation** capable of obtaining the analysis field that satisfies the model dynamics. Comparison with the results of assimilating altimetric data into a 1.5- **layer primitive** equation model by the classical optimal **interpolation** clearly shows the advantage of this assimilation method. For example, the analysis field is

significantly...

... the western boundary current regions and their extensions, where some assumptions inherent in the optimal **interpolation**, such as the Gaussian function for the error covariance matrix and the geostrophic balance for...

... carried out using the analysis fields from the variational assimilation scheme and from the optimal **interpolation** as initial conditions. The case initialized by the optimal **interpolation** scheme exhibits inertia-gravity waves generated by the geostrophic initialization leading to contamination of the...

...Identifiers: optimal **interpolation** scheme...

**43/3,K/3** (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2007 Institution of Electrical Engineers. All rts. reserv.

06481508 INSPEC Abstract Number: A9705-9210-024

**Title: Successive correction of the mean sea surface height by the simultaneous assimilation of drifting buoy and altimetric data**

Author(s): Ishikawa, Y.; Awaji, T.; Akitomo, K.; Bo Qiu

Author Affiliation: Dept. of Geophys., Kyoto Univ., Japan

Journal: Journal of Physical Oceanography vol.26, no.11 p.2381-97

Publisher: American Meteorol. Soc,

Publication Date: Nov. 1996 Country of Publication: USA

CODEN: JPYOBT ISSN: 0022-3670

SICI: 0022-3670(199611)26:11L.2381:SCMS;1-Z

Material Identity Number: J181-96012

U.S. Copyright Clearance Center Code: 0022-3670/96/\$4.25+0.25

Language: English

Subfile: A

Copyright 1997, IEE

...Abstract: twin experiments for the double-gyre circulation system are performed using a 1 1/2 - **layer primitive** equation model. An optimal **interpolation** for the multivariate is used for the assimilation scheme that assumes the geostrophic relationship between...

...Identifiers: 1 1/2 - **layer primitive** equation model...

... **interpolation** ;

**43/3,K/4** (Item 4 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2007 Institution of Electrical Engineers. All rts. reserv.

03440892 INSPEC Abstract Number: C85022322

**Title: Point pattern representation and pattern matching of handwritten characters by relaxation technique**

Author(s): Ogawa, H.

Author Affiliation: Dept. of Electron., Fukui Univ., Japan

Conference Title: 1983 Proceedings of the International Conference on Systems, Man and Cybernetics (Cat. No. 83CH1962-0) p.388-92 vol.1

Publisher: IEEE, New York, NY, USA

Publication Date: 1983 Country of Publication: USA 2 vol. (xxi+1267+x) pp.

U.S. Copyright Clearance Center Code: CH1962-0/83/0000-0388\$00.75

Conference Sponsor: IEEE

Conference Date: 29 Dec. 1983-7 Jan. 1984 Conference Location: Bombay



and New Delhi, India  
Language: English  
Subfile: C

...Abstract: the shapes, and also becomes a good approximation to the outcome of thinking by linear **interpolation** between the consecutive points. The structure of a character can be divided into three **layers** called **primitive** structure, local structure, and global structure and can be analyzed hierarchically. At each layer a...

43/3,K/5 (Item 1 from file: 6)  
DIALOG(R)File 6:NTIS  
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1568053 NTIS Accession Number: AD-A230 125/7

**Evaluation of a Simple Data Assimilation System for Gulf Stream Forecasting**

Rhodes, R. C. ; Bennett, T. J.  
Naval Oceanographic and Atmospheric Research Lab., Stennis Space Center, MS.

Corp. Source Codes: 097033000; 421485  
Report No.: NOARL-AB-90-322-110  
1990 1p  
Languages: English  
Journal Announcement: GRAI9112  
Naval Oceanographic and Atmospheric Research Lab., Ocean Sciences Directorate, Stennis Space Center, MS 39529-5004. No copies furnished by DTIC/NTIS.

NTIS Prices: Not available NTIS

A Gulf Stream forecast system based on the NOARL two- **layer** , **primitive** equation circulation model is being developed and transitioned to operational U.S. Navy use by...

... The model is initialized using a dynamic height field obtained by applying the Optimum Thermal **Interpolation** System (OTIS) feature models to a map of front and ring positions. Results of experiments...

Descriptors: \*Gulf Stream; Assimilation; Circulation; Cloud cover; Dynamics; Equations; Forecasting; Height; Information systems; **Interpolation** ; Maps; Mathematical models; Models; Navy; Optimization; Paths; Rings; Skills; Statistics; Thermal properties; Verification

43/3,K/6 (Item 2 from file: 6)  
DIALOG(R)File 6:NTIS  
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1275733 NTIS Accession Number: AD-A174 103/2

**Sampling Strategies and Model Assimilation of Altimetric Data for Ocean Monitoring and Prediction**

Kindle, J. C.  
Naval Ocean Research and Development Activity, NSTL Station, MS.  
Corp. Source Codes: 055026000; 392773  
15 Feb 86 16p  
Languages: English Document Type: Journal article  
Journal Announcement: GRAI8705  
Pub. in Jnl. of Geophysical Research, v91 nC2 p2418-2431, 15 Feb 86.  
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email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A02/MF A01

... examine assimilation of altimeter-derived sea surface heights into numerical ocean circulation models. A one- **layer** reduced gravity **primitive** equation circulation model of the Gulf of Mexico is used; the Gulf of Mexico is...

...Descriptors: altimeters; Spaceborne; Scientific satellites; Monitoring ; Eddies(Fluid mechanics); Velocity; Geostrophic currents; Oceanographic data; Resolution; Forecasting; **Interpolation** ; Reprints

**43/3,K/7 (Item 1 from file: 34)**

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

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11472654 Genuine Article#: 655TD No. References: 32

**Title: Short-range forecast experiments of the Kuroshio path variabilities south of Japan using TOPEX/Poseidon altimetric data - art. no. 3010**

Author(s): Komori N (REPRINT) ; Awaji T; Ishikawa Y

Corporate Source: Japan Marine Sci & Technol Ctr, Earth Simulator Ctr, Kanazawa Ku, 3173-25 Showa Machi/Yokohama/Kanagawa 2360001/Japan/ (REPRINT); Kyoto Univ, Dept Geophys, Grad Sch Sci, Sakyo Ku, Kyoto 6068502//Japan/; Meteorol Res Inst, Japan Meteorol Agcy, Tsukuba/Ibaraki 3050052/Japan/

Journal: JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS, 2003, V108, NC1 (JAN 11), P3010-3010

ISSN: 0148-0227 Publication date: 20030111

Publisher: AMER GEOPHYSICAL UNION, 2000 FLORIDA AVE NW, WASHINGTON, DC 20009 USA

Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

...Abstract: situ hydrography and TOPEX/Poseidon (T/P) altimetry, into a high-resolution 1-1/2 **layer primitive** equation model every 15 days for 5 years from 1993 to 1997. The initialization scheme...

...is suitable for initialization in the western boundary current regions where initialization by simple optimal **interpolation** is inappropriate. The time series of the analysis field well represents the Kuroshio path variations...

**43/3,K/8 (Item 2 from file: 34)**

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

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03890205 Genuine Article#: QP834 No. References: 25

**Title: A STEADY-STATE KALMAN FILTER FOR ASSIMILATING DATA FROM A SINGLE POLAR ORBITING SATELLITE**

Author(s): BANFIELD D; INGERSOLL AP; KEPPELNE CL

Corporate Source: CORNELL UNIV, 420 SPACE SCI/ITHACA//NY/14853; CALTECH, DIV GEOL & PLANETARY SCI/PASADENA//CA/91125; CALTECH, JET PROP LAB/PASADENA//CA/00000

Journal: JOURNAL OF THE ATMOSPHERIC SCIENCES, 1995, V52, N6 (MAR 15), P 737-753

ISSN: 0022-4928

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

...Abstract: depend on longitudinal distance from the observation point,

49/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

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08804803 INSPEC Abstract Number: B2004-01-6135E-111, C2004-01-5260B-282

**Title: Multiscale edge detection based on representation of edge characterized by hidden Markov model**

Author(s): **Sun Jun-Xi** ; Chen Ya-Zhu; Gu Dong-Bing

Author Affiliation: Inst. of Biomed. Instrum., Shanghai Jiao Tong Univ., China

Journal: Chinese Journal of Computers vol.26, no.4 p.497-501

Publisher: Science Press,

Publication Date: April 2003 Country of Publication: China

CODEN: JIXUDT ISSN: 0254-4164

SICI: 0254-4164(200304)26:4L.497:MEDB;1-G

Material Identity Number: B714-2003-008

Language: Chinese

Subfile: B C

Copyright 2003, IEE

Author(s): **Sun Jun-Xi** ; Chen Ya-Zhu; Gu Dong-Bing

Abstract: Based on the properties of an **enhanced image**, a novel approach to **edge** detection is developed by modelling the edges as hidden Markov models. The model views an...

...order to reduce the dependency on the prior knowledge and the complexity of algorithms, an **image** is represented in the frame of the multiscale analysis by wavelet transformation. It leads to...

...Descriptors: **image** enhancement...

... **image** representation...

... **image** resolution

...Identifiers: **image** enhancement...

... **image** representation

49/3,K/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

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08629702 INSPEC Abstract Number: B2003-06-6135-292, C2003-06-1250M-066

**Title: An approach to fingerprint image enhancement based on fuzzy logic**

Author(s): Su Fei; **Sun Jing-ao** ; Cai An-ni

Author Affiliation: Coll. of Telecommun. Eng., Beijing Univ. of Posts & Telecommun., China

Journal: Journal of China Institute of Communications vol.23, no.9 p.82-7

Publisher: People's Posts & Telecommun. Publishing House,

Publication Date: Sept. 2002 Country of Publication: China

CODEN: TOXUDB ISSN: 1000-436X

SICI: 1000-436X(200209)23:9L.82:AFIE;1-Q

Material Identity Number: F874-2002-012

Language: Chinese

Subfile: B C

Copyright 2003, IEE

**Title: An approach to fingerprint image enhancement based on fuzzy logic**

Author(s): Su Fei; **Sun Jing-ao** ; Cai An-ni

Abstract: A fuzzy logic based algorithm for the fingerprint **image**

enhancement and edge detection is presented. In this method, a fuzzy edge detector is applied to make a soft decision on the edge degree for each pixel, and according to these decisions, the image contrast is enhanced. Then the fuzzy logic methodology is employed to perform the detail sharpening...

... this method is effective in removing noises without destroying useful information contained in a fingerprint image .

...Descriptors: image enhancement

Identifiers: fingerprint image enhancement...

49/3,K/3 (Item 1 from file: 35)  
DIALOG(R)File 35:Dissertation Abs Online  
(c) 2006 ProQuest Info&Learning. All rts. reserv.

01615029 ORDER NO: AADMQ-21078

**WAVELET ARTIFACTS AND EDGE-BASED POSTPROCESSING ( IMAGE COMPRESSION)**

Author: SUN, JIM QILE

Degree: M.SC.

Year: 1997

Corporate Source/Institution: THE UNIVERSITY OF WESTERN ONTARIO (CANADA)  
(0784)

Source: VOLUME 36/02 of MASTERS ABSTRACTS.

PAGE 568. 68 PAGES

ISBN: 0-612-21078-2

**WAVELET ARTIFACTS AND EDGE-BASED POSTPROCESSING ( IMAGE COMPRESSION)**

Author: SUN, JIM QILE

Wavelet based image compression algorithms that employ pyramid encoding, quadrature mirror filters or so-called wavelet transforms have been very successful in achieving a good image quality within a low bit rate. The image coding technique called Embedded Zero-tree Wavelet (EZW), introduced by J. M. Shapiro, is very...

...and the wavelet coder itself, and show where these artifacts result from.

To improve the image quality along the diagonal edges of an approximation image, we also develop an effective edge-based image postprocessing algorithm by improving the image visual quality along the diagonal edges for an approximation image in the decoder side without introducing any additional bits.

Some experimental results are also shown...

49/3,K/4 (Item 1 from file: 144)  
DIALOG(R)File 144:Pascal  
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16815497 PASCAL No.: 04-0473166

A new cell projection algorithm based on feature region of 3D medical data field

Virtual reality and its applications in industry : Tianjin, 23-25 October 2003

XINWULI CHONGYANG; HAO YANGYUFAN; MIAO MAO; XIAOXIANG LIU

SUN Jizhou, ed; PAN Zhigeng, ed

Biomedical Engineering Institute of Northwestern Polytechnical University  
Xi'an, 710072, China; Xi'an Technical Research Center of Virtual Reality  
Xi'an, 710072, China

International Society for Optical Engineering, Bellingham WA, United States

International conference on virtual reality and its applications in industry, 4 (Tianjin CHN) 2003-10-23

Journal: SPIE proceedings series, 2004, 5444 478-483

Language: English

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SUN Jizhou , ed; PAN Zhigeng, ed

... to a unitary and integral field, and the paper extends the method of segmenting 2D **image** and makes it can be used to extract edge transition region of 3D data field...

... region are projected separately. Last, the realization and experiment results show that the algorithm can **improve image** quality of **edge** transition region and guarantee rendering speed effectively.

English Descriptors: **Image** segmentation; **Image** quality; Edge detection; Medical **imagery** ; Data field; Medical application

French Descriptors: Segmentation **image** ; Qualite **image** ; Detection contour; Imagerie medicale; Zone donnee; Application medicale; Donnee medicale 3 dimensions; Region transition

Spanish Descriptors: Calidad **imagen** ; Deteccion contorno; Imagineria medica; Zona dato; Aplicacion medical

49/3,K/5 (Item 2 from file: 144)

DIALOG(R)File 144:Pascal

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16814740 PASCAL No.: 04-0472356

**Study on noise depression of the image intensifiers system based on the wavelet transforms**

**Virtual reality and its applications in industry : Tianjin, 23-25 October 2003**

LIMING WANG; YINGLIANG ZHAO; YAN HAN

SUN Jizhou , ed; PAN Zhigeng, ed

Key Laboratory of Instrumentation Science&Dynamic Measurement (North China University of Science and Technology), Ministry of Education, Taiyuan, Shanxi, 030051, China

International Society for Optical Engineering, Bellingham WA, United States

International conference on virtual reality and its applications in industry, 4 (Tianjin CHN) 2003-10-23

Journal: SPIE proceedings series, 2004, 5444 543-546

Language: English

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**Study on noise depression of the image intensifiers system based on the wavelet transforms**

SUN Jizhou , ed; PAN Zhigeng, ed

In X-ray digital radiography system based on the **image** intensifiers, there are many kinds of noise which originate from different imaging elements, such as...

... influence on the imaging quality. It maybe influence the result of

identifying defects from the **image** and the spatial resolution of X-ray digital radiography system. In the paper, in order...

... It is shown that the results of noise depression are effective, the spatial resolution of **image** is **improved**, the **edges** and details of **image** are **enhanced**. It is also expressed that the method to depress the noise of X-ray digital...

English Descriptors: Digital radiography; Wavelet transformation; X ray; X ray radiography; Multiresolution analysis; **Image** intensifier; CCD imaging; **Image** resolution; Imaging; CCD camera

French Descriptors: Radiographie numerique; Transformation ondelette; Rayon X; Radiographie RX; Analyse multiresolution; Intensificateur **image**; Imagerie CCD; Resolution **image**; Formation **image**; Camera CCD

Spanish Descriptors: Radiografia numerica; Transformacion ondita; Rayos X; Radiografia RX; Analisis multiresolucion; Intensificador **imagen**; Imageria CCD; Formacion **imagen**; Camara CCD

?